

Beginning approximately 20 miles southeast of Philadelphia, Pennsylvania, the Great Egg Harbor River (figs. 1 and 2) meanders through New Jersey's Pinelands

on its way to Ocean City, New Jersey, where it empties into the Atlantic Ocean. This waterway boasts natural, scenic, cultural, and recreational resources. Increased residential development and recreational use have generated concerns about crowding, potential conflicts

"Increased residential development and recreational use have generated concerns about crowding, potential conflicts among users, safety, and degraded recreational and scenic quality..."



Figures 1 and 2 (left and above). Authorized in 1992, the Great Egg Harbor Scenic and Recreational River runs through the Pinelands of New Jersey and is near the urban centers of Philadelphia, Trenton, Camden, and Wilmington. It attracts recreationists and preserves scenic, natural, and cultural resources, including the Weymouth Furnace historic area.

among users, safety, and degraded recreational and scenic quality in recent years. Public officials from municipalities along the river corridor have worked with landowners and environmental organizations to protect the "outstandingly remarkable" resources along the river corridor. In 1992, as a result of these efforts, congress designated the river and some of its tributaries as "recreational and scenic" under the Wild and Scenic Rivers Act of 1968 and made the river a unit of the National Park System. Thereby the National Park Service (NPS) acquired a role in planning and management for the river; however, the National Park Service owns no land within the designation. Instead, the river and its banks are owned by 12 local municipalities, other governmental agencies, private landowners, and businesses that provide recreational services and facilities. The National Park Service reviews local management plans to ensure consistency with the scenic and recreational river designation but have limited legal jurisdiction and no enforcement ability.

As the population of the area has grown and recreation has become more popular, vocal members of the public have expressed concerns over continuing developments (especially subdivision of land and construction of docks), environmental protection, and increased recreational use. In order to develop a Comprehensive Management Plan for the river, the National Park Service

needed some clear guidance about public attitudes toward various policies. In an effort to assess public perceptions of current river conditions and to gauge the level of public support for potential management actions in the river corridor, the National Park Service engaged researchers from Virginia Tech to study these issues.



Management actions for the river primarily affect two stakeholder groups: riverfront landowners and river visitors who operate a variety of watercraft on the Great Egg Harbor River. The study focused on these two groups. Results have been used in the development of a Comprehensive Management Plan for the Great Egg Harbor Scenic and Recreational River (see sidebar, page 45).

Methods

After getting approval of the public survey from the Office of Management and Budget, we contacted 360 recreational boaters during the summer of 1998 at public marinas, canoe liveries, and public boat launches and asked them to provide their names and addresses for a mail survey. We also acquired names and addresses of riverfront landowners through county tax records. We identified just over 600 individuals for the study. In a survey mailed in the fall of 1998, both groups answered questions about crowding, conflicts among users, safety, environmental and scenic qualities, preferences for quality experiences, and support for current and potential management actions and policies. Two weeks following the initial mailing, we sent postcards indicating the importance of the study and reminding stakeholders to respond. People failing to return the survey within three weeks of the reminders were sent another questionnaire. This final contact resulted in 438 completed surveys and an overall response rate of 44% (44% for landowners and 45% for boaters).

Response bias checks were not performed, and given the relatively low response rate, we should be careful about generalizing from these findings. Other studies have found that nonrespondents tend to be less personally concerned about the particular issues in question (Hall and Shelby 1996, Hockett and Hall 1999). If this is the case with our respondents, then our findings likely represent the views of concerned and involved boaters and landowners. As these are the types of individuals likely to participate in land-use planning, we think our findings are useful.

Results

Perceptions of conflicts

Landowners and boaters were asked if they had noticed various types of conflicts, and if so, whether their experiences were negatively affected (fig. 3). Generally, landowners and boaters indicate similar perceptions of conflict on the Great Egg Harbor River for issues unrelated to private lands. For example, both of these groups are sensitive to reckless boating, speeding boats, and crowding. They also agree that conflicts between users of motorized and nonmotorized boats, and between water skiers and other recreationists, detract from their experiences on the river.

However, there are significant differences between the two groups in their perceptions of noise and issues related to private lands. In each of these cases, landowners are significantly more likely to indicate that impacts related to these issues detract from their experience. Their concerns about trespassing and about conflicts with recreational users are especially pronounced. These findings are consistent with previous research that shows that riverfront landowners often indicate problems associated with littering, vandalism, trespassing, and invasion of personal property (Roggenbuck and Kushman 1980).

Interestingly, the number of docks on the river is much less of a concern than the length of docks (fig. 4). This suggests that riverfront landowners are concerned more about safety and access problems posed by longer docks than by any aesthetic or environmental problems that might be caused by an increased number of docks.

Thus, there are similarities between landowners and recreational boaters, but also some significant differences. In general, landowners are most sensitive to issues, such as trespass and vandalism, which affect them personally as residents. We were therefore interested in learning whether a similar pattern was evident in their support for river management.

FACTORS AFFECTING EXPERIENCE QUALITY

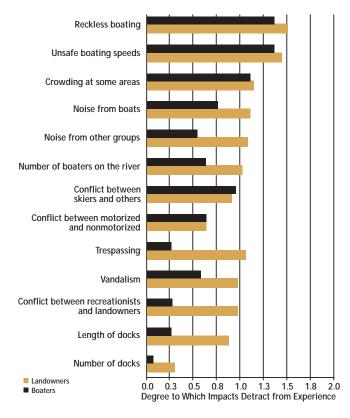


Figure 3. Various factors affect respondents' perceptions of the quality of their experiences. Respondents who did not notice items were classed as indicating "no effect," represented by zero. The scale was anchored with "3," indicating "detracts a lot."



Figure 4. Dock construction is a controversial issue. The number of docks on the river is much less of a concern than dock length, however.

Attitudes about environmental protection

Respondents indicated on a scale from -2 (strongly disagree) to +2 (strongly agree) their general opinions about environmental issues. The two groups are quite consistent in having generally positive attitudes toward environmental protection (fig. 5). For example, both agreed that the riverbank and vegetation along the river should be protected and that environmental regulations for private lands are necessary to protect the river's resources. Their opinions about specific regulations pertaining to private land are also alike (fig. 6). Both groups support zoning, riparian buffers, restrictions on the developments of new riverfront homes, and other items (see fig. 6). This similarity is surprising—we had expected landowners to be less supportive of actions that could restrict their actions or limit options on their land. Recreational boaters—owning no land by definition—would not be adversely affected, and could conceivably benefit from the aesthetic or environmental effects of such regulations. Evidently, such distinctions are not important for possessing these general environmentally oriented attitudes.

Also important to note is that, despite high levels of general concern for the environment, a sizeable number of both boaters and landowners do not actively support many possible land-use restrictions (fig. 5). For example, only 50% support riparian buffers or restrictions on development (fig. 6). This suggests that, if such actions are contemplated, planners and managers may need to engage in additional dialog with stakeholders who are neutral or opposed to such actions.

One notable exception to the general similarities between boaters and landowners stood out: a majority of boaters, but less than half of the landowners, feel the National Park Service should be more involved in river planning (fig. 5). Landowners were more likely to feel that municipalities, rather than the National Park Service, should take the lead. This suggests that, to gain acceptance from local landowners,

the National Park Service may need to educate landowners about its legal role and management obligations. It also suggests that the National Park Service should continue its current strategy of coordination and cooperation, rather than directing the course of policy decisions.

Opinions about dock construction deserve an additional comment. Clearly neither landowners nor boaters support a policy of unrestricted development, but neither do they support a policy of prohibiting construction. Instead, the most favored policy is to allow new docks, but to limit the allowable length. This is consistent with the reactions reported about factors affecting quality experiences (fig. 3).

ATTITUDES TOWARD ENVIRONMENTAL PROTECTION

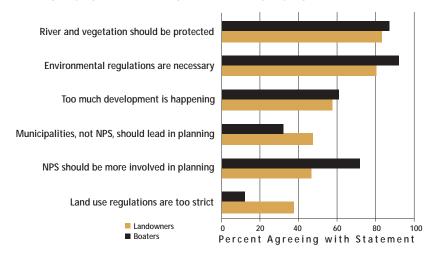


Figure 5. Boaters and landowners are quite consistent in having generally positive attitudes toward environmental protection.

ATTITUDES TOWARD RESTRICTIONS ON PRIVATE RIVERFRONT LAND

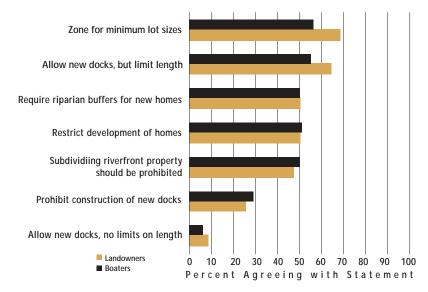


Figure 6. Despite high levels of general concern for the environment, a sizeable number of both boaters and landowners do not actively support many possible land-use restrictions



Attitudes about recreational developments

Although landowners and boaters have quite similar views on environmental protection, they diverge sharply on their attitudes about new recreational developments (fig. 7). On a scale from -2 (strongly oppose) to +2 (strongly support), respondents indicated their level of support for various recreational developments. Boaters and landowners significantly differ in their evaluations of all seven of these recreational developments. Boaters indicated support for the establishment of additional launching points and public restrooms along the river corridor. Landowners on average opposed or were neutral to these types of developments. Although both boaters and landowners indicated opposition to the construction of new public or private marinas in addition to the construction of new canoe liveries, landowners evaluated these developments more negatively than did boaters. Although both boaters and landowners indicated support for the construction of hiking trails and a nature center on public lands along the river, landowners seem less supportive of these developments. Perhaps

"New facilities may raise concerns about new sources of conflict or trespass." landowners do not see themselves as benefiting from such developments, especially boating facilities. Rather, new facilities may raise concerns about new sources of conflict or trespass.

In general, then, river managers might consider certain types of recreational improvements, particularly those that do not increase use on the water. Most boaters and

landowners would support such facilities. However, managers might consider policies that would discourage additional water-based recreational use. Many landowners actively oppose

"Managers might consider policies that would discourage additional water-based recreational use."

and a majority of boaters do not support such developments. We conclude that both groups are sensitive to conflict and crowding issues.

Implications

This study identifies points of convergence and divergence that are important to the National Park Service in moving forward with management planning for Great Egg Harbor Scenic and Recreational River. Interestingly, the levels of similarity or difference vary depending on the issue under investigation. In general, both groups of stakeholders we studied support broad environmental goals that are consistent with the wild and scenic river designation. However, there is some question about the level of support that might be encountered for specific types of restrictions that might be considered for private land, and opposition among many landowners toward certain new boating-access developments. Management proposals should,

ATTITUDES ABOUT RECREATIONAL DEVELOPMENTS

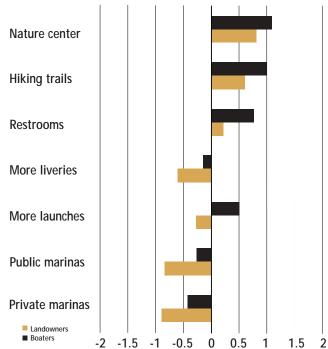


Figure 7. Boaters and landowners significantly differ in their attitudes about seven different types of recreational development.

therefore, be clearly defensible in terms of their environmental benefits, in order to maximize public support.

The data indicate that for the controversial issue of dock construction, the National Park Service might advocate a policy of limiting the length of docks, but be somewhat more lenient about granting permits for the construction of new docks. However, because both boaters and landowners are adversely affected by conflicts and crowding they now experience on the river, any dock or development policy that would increase use should be evaluated carefully.

Results from the survey suggest that conflicts are the most significant problems for both groups. Some of these problems may be amenable to resolution through public education efforts, while others may require more direct regulation or enforcement. For example, issues of noise, trespass, and unsafe speeds might be addressed through boater education about safety and etiquette, while vandalism and reckless boating may require an increased law enforcement presence. The National Park Service and municipalities could work cooperatively with public safety agencies to increase the law enforcement presence along the river and to enforce existing regulations and procedures with stronger penalties for violations.

The study highlights the importance of identifying and characterizing relevant stakeholders for management when planning for recreation and environmental protection. Often in settings such as this, local landowners are

vocal and active participants in planning. Our results suggest that this group may share some concerns with other members of the public (for example, about safety or environmental protection), but may be more sensitive to other

impacts such as trespass or vandalism. Because of this, they may be reluctant to accept new recreational developments. Studies that approach only the recreating public may fail to capture the views of other stakeholders affected by management decisions and policies.

"Studies that approach only the recreating public may fail to capture the views of other stakeholders affected by management decisions and policies."

References

Hall, T. E., and B. Shelby. 1996. McKenzie River boater study. Final report. McKenzie Ranger District, Willamette National Forest, and Eugene District, Bureau of Land Management, Eugene, Oregon.

Hockett, K. S., and T. E. Hall. 1999. Shenandoah National Park backcountry and wilderness visitor study. Final report. Shenandoah National Park, Luray, Virginia.

Roggenbuck, J. W., and K. G. Kushman. 1980. Riparian landowners, attitudes toward a state wild river program. Journal of Forestry 78(2):91–93.

About the Authors

At the time of this research, Michelle Adcock was a graduate student, and Troy Hall was an Assistant Professor, in the Department of Forestry at Virginia Tech. Dr. Adcock is now the Associate Extension Agent with 4-H for the Craig County Extension Office in New Castle, Virginia. She can be reached at 540-864-5812 or aadcock@vt.edu. Troy Hall is now an Assistant Professor in the Department of Resource Recreation and Tourism in the College of Forest Resources at the University of Idaho. She can be reached at 208-885-9455 or troyh@uidaho.edu.



There is a concern that development pressures may adversely affect this scenic section of the Great Egg Harbor River.

Study findings assist park management planning

By Mary Vavra

The planning committee for Great Egg Harbor National Scenic and Recreational River incorporated information and recommendations resulting from the 1998 Virginia Tech social science study into the May 2000 final Comprehensive Management Plan and Environmental Impact Statement. This fundamental planning tool defines the purposes of resource protection and outlines preferred experiences for living within and visiting the river corridor. The Great Egg Harbor River is managed by the National Park Service in cooperation with the State of New Jersey, four counties, and 12 municipalities.

The social science study compiled information about river users, which gave the National Park Service a profile of park visitors and an understanding that most live within 20 miles of the river corridor. The Great Egg Harbor River is clearly a close-to-home recreational resource. Recognizing that the river was already overcrowded in 1998 and is close to major urban centers, the National Park Service recommended limiting additional public access. Moreover, information gathered from the surveys showed support for increased law enforcement on both the tidal and nontidal sections of the river.

The information gathered through the study also supports limiting the size and design of docks which continues to be a major concern in the tidal section of the river (see photo). The National Park Service used the information to work with the New Jersey Department of Environmental Protection to develop state regulations regarding dock designs to ensure that structures do not adversely affect the river's outstandingly remarkable resource values.

About the author

Mary Vavra is a Planner with the Philadelphia Support Office of the National Park Service. She can be reached at 215-597-9175 and mary_vavra@nps.gov.

